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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,900	01/16/2004	Patrick Brant	2004B004	7061
23455 7590 04/07/2008 EXXONMOBIL CHEMICAL COMPANY 5200 BAYWAY DRIVE P.O. BOX 2149 BAYTOWN, TX 77522-2149				
EXAMINER LEVKOVICH, NATALIA A				
ART UNIT 1797		PAPER NUMBER		
MAIL DATE 04/07/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/758,900

Applicant(s)

BRANT ET AL.

Examiner

NATALIA LEVKOVICH

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-11, 17-20, 22 and 32-43 is/are pending in the application.
- 4a) Of the above claim(s) 32-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11, 17-20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/US)
Paper No(s)/Mail Date 16-JUN-2004, 06-JUL-2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5, 7-11, 17-20 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being unclear for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites steps of 'performing a time resolved luminescence analysis' and 'determining a reference/sample emission energy and a reference/sample lifetime'. These are passive limitations because they merely name results of some unspecified preceding actions needed for obtaining the results. Thus, the claim is not clear for omitting essential process steps. See MPEP § 2172.01. The same considerations apply to claim 19, with regards to determining corresponding emission energies and lifetimes, and to claim 20, with regards to determining emission intensity and extinction coefficient.

In claim 4, 'irradiating ... with ... wavelengths', is unclear. The claim also recites 'measuring the time dependence and intensity of an emitted radiation at one or more emission energies'. Does the intended step rather include 'measuring the time dependence of intensity...'?

In claim 18, values which 'represent an active catalyst site in the catalyst system, to determine the number of active catalyst sites in the catalyst system', is unclear.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 1-5, 7-8, 11, 17-18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over McFarland; et al. (US 6441901) in view of Crevier; et al. (US 6738529).

With respect to claims 1-3, 19 and 22, McFarland; discloses systems and methods for rapid screening of libraries of different materials, such as catalysts (Abstract). Catalysts can be prepared from precursors and further treated with "reducing agents, oxidizing agents and other third components and modifiers [including activators – Ex.] to produce optimized materials. Once an array of

catalysts is formed, the screening methods of the present invention can be used to characterize the catalytic properties of the various compounds by observing, for example, activity, lifetime and selectivity for a variety of catalytic transformations" (Col.11, lines 59 plus).

McFarland; further teaches characterizing members in an array of materials with the steps of: providing a plurality of different materials having an optically active layer (including an electroluminescent material), monitoring intensity of luminescence of the array of materials and comparing members of the array with respect to the luminescence, for identifying materials for large scale preparation based upon the comparing step" – (See Claim 1). The step of comparing would involve subtracting the values to be compared.

McFarland does not teach comparing a measured parameter value for a tested substance to a corresponding reference value. However, this technique is basic in the art. For example, Crevier discloses " subtracting a reference point value, for example, a value measured ... for background noise or some other value (such as reflectance or base line)", from a corresponding value of a tested material (Col. 6, lines 12-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a step of subtracting a reference value of a parameter of interest (intensity/energy, lifetime) for a corresponding test value in the modified method of McFarland, in order to define a change in catalytic activity, compared to a base line. It would have been also obvious to conclude that a positive or negative difference value would denote that activation of a catalyst, respectively, did or did not take place.

With respect to claims 4-5, 7-8, 11 and 17-18, although McFarland does not teach measurements being conducted and compared at one or more emission energy levels, it would have been clearly within the ordinary skill of an artisan to have optimized process parameters (such as energy level, temperature, threshold level, or other conditions) in the modified method of McFarland, in order to improve sensitivity and precision of the measurements.

Allowable Subject Matter

5. Claim 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art does not teach, or fairly suggest a method for quantitatively determining the concentration of an activated catalyst, comprising the step of determining a total emission intensity value from the sum of a plurality of sample output values which correlate to an essentially non-zero energy value and the step of determining the concentration of an active catalyst site in the catalyst system present in the sample according to the equation recited in claim 20.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalia Levkovich whose telephone number is 571-272-2462. The examiner can normally be reached on Mon-Fri, 2 p.m.-10 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax

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phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jill Warden/

Supervisory Patent Examiner, Art Unit 1797